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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,469	10/31/2000	Eli Oklejas, Jr.	OKL 0120 PUS	1105

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EXAMINER

FORTUNA, ANA M


ART UNIT PAPER NUMBER

1723

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/702,469	OKLEJAS, JR., ELI	
Examiner	Art Unit	
Ana M Fortuna	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10-15 is/are allowed.
- 6) ☐ Claim(s) 1,3-9 and 16-20 is/are rejected.
- 7) ☐ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1, 3-9, 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the reverse osmosis membrane or desalination membrane. The specification is directed to a reverse osmosis membrane system and process of water desalination see pages 1-2, figures and figures description. There is not support in the specification or drawings for performing the process or having a desalination system without the membrane. There is also not description of a vessel without a membrane and producing a concentrate or a high pressure fluid. The system without the membrane will be inoperative, the chamber by itself cannot produce concentrate (high pressure outlet) and a permeate (low pressure outlet).

2. Claim 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 16, the term "using from a first portion of a high pressure fluid from a high pressure outlet of a first process chamber" is incomplete and unclear as to what use is intended. The claim is unclear as to whether the use and the recirculating step refer to the same steps, or as to whether the use constitute an additional outlet or discharge. For examination purpose the claim has been interpreted

as having an additional discharge or water use other than recirculation back to the system.

3. Claims 16-20 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the step of passing the fluid to a separation medium or a desalination membrane (RO).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 16, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelmulder (4,243,523)(hereinafter '523). Reference '523 discloses the elements of the system used in claim 16, and the use for purifying or desalinating water, and recirculation of a portion of the high pressure water passing to the housing containing a membrane back to the process (abstract, Figures 1-2, column 2, lines 28-53). The system used in the process includes a process chamber containing a reverse osmosis membrane (9), a feed flow pump ((5), the feed is separated into a permeate product and a concentrate stream (high pressure side) (13, 10), means for busting the pressure of the output from the feed pump, and recirculating a portion of the high pressure outlet

(fluid) from the chamber at a point between the pump and the process chamber (element 20, Figs. 1-2, column 3, lines 40-68, column 4, lines 1-8, column 7, lines 7-35). As to claims 18-20, a jet pump or adductor is disclosed in reference '523 (element 20), its connection with the second portion of the high pressure outlet from the chamber (concentrate) is also disclosed (elements 5, 6, 20, 28, 24). A second portion of the concentrate or high pressure outlet fluid from the chamber is "used" for discharge, e.g. through conduit 10 and discharge valve (12).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pelmulder (4,243,523('523) in view of Uhlinger (6,190,556 B1)(hereinafter '556). Pelmulder ('523) discloses the system of claim 16, as discussed above, however, fails to disclose using a turbine to bust the fluid from the pump. Reference '556 teaches using a turbine (element (23) as buster pump, for busting the pressure from a first feed pump (21), to a chamber containing separation membranes (Fig. 1). It would have been obvious to one skilled in the art at the time the invention was made to use a turbine connected to a feed pump as feed buster pump in a membrane separation system having a chamber with permeate and retentate outlets (high and low pressure outlets),

e.g. to increase the feed pressure to the chamber, as suggested by '556 (column 5, lines 67-68, column 6, lines 1-7, column 9, second paragraph).

Allowable Subject Matter

8. Claims 2 would be allowable if rewritten to overcome the rejection(s) set forth in this Office action to include all of the limitations of the base claim and any intervening claims.

9. Claims 3-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 10-15 are allowed over the prior art of record. Reasons are state in paper of 7/15/03.

Response to Arguments

11. Applicant's arguments filed 10/09/03 have been fully considered but they are not persuasive. The statements in the specification page 6, argued by applicant do not provide basis for performing the process or providing the apparatus without a membrane, and further do not provide chamber structure for producing a high pressure out let and a low pressure outlet without the membrane separation or reverse osmosis. The rejection of claims under 112 is maintained, claim 16 have been further added to the rejection, a new ground of rejection based on newly found prior art is also discussed above and covering the limitations of claims 16, and 18-20, and further claim 17.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 271-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

A handwritten signature in black ink, appearing to read 'Ana M Fortuna', is positioned above the printed name.

Ana M Fortuna
Primary Examiner
Art Unit 1723

AMF
December 28, 2003